



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,595	01/30/2004	Yaling Fan	STL11288.00	7053

7590 03/23/2006

Fellers Snider Blankenship Bailey & Tippens
Bank One Tower
100 North Broadway
Suite 1700
Oklahoma City, OK 73102-0621

EXAMINER

MERCEDES, DISMERY E

ART UNIT PAPER NUMBER

2627

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/768,595	Applicant(s) FAN ET AL.	
	Examiner Dismery E. Mercedes	Art Unit 2651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10-12 and 14-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-7, 10-12, 14, 17-18, 20-21, 23-25 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 15, 16, 19 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>04/28/2007</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 & 10 have been considered but are moot in view of the new ground(s) of rejection.
2. The indicated allowability of claims 2,14,17 is withdrawn in view of the newly discovered reference(s) to Balster, Shimizu et al. and Ahn. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3,6-7,10-12,14,18,20-21,23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balster et al. (US 5,818,658), in view of Shimizu et al. (US 6,369,978).

As to Claim 1, Balster et al. discloses a cantilevered assembly comprising a transducer (as depicted in Fig.1); and a flow control device to provide blowing or suction (col.2, lines 51-67). Balster et al. fails to specifically disclose that the blowing or suction is provided to a selected one of an upstream leading edge or a downstream trailing edge. However, Shimizu et al. discloses such pressure provided to downstream leading edge of a shroud (col.5, lines 20-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the device as disclosed by Balster et al. with the teachings of Shimizu et al., the motivation being to

Art Unit: 2651

reduce flutter and turbulance and prevent additional pressure fluctuation upstream and downstream sides (col.9, lines 35-37 of Shimizu et al.).

As to Claim 2, the combination of Balster et al. in view of Shimizu et al. further discloses flow control device comprises a nozzle coupleable to a pressure source or blower to supply pressure proximate to the downstream region of the cantilevered assemble (col.2, lines 51-67 and fig.1 of Balster and col.5, lines 20-30 of Shimizu et al., wherein the nozzle can provide the pressure on the downstream side of the arm as disclosed in Shimizu et al.).

As to Claim 3, Balster et al. further discloses a plurality of cantilevered assemblies coupled to an actuator having a stack height and wherein the flow control device comprises a nozzle having an elongated outlet having a dimension substantially corresponding to the stack height (figs. 1-2 and disclosure thereof and col. 2, lines 54-56).

As to claim 6, Balster et al. further discloses wherein the transducer comprises one of a servo head, a write head, a read head or a read/writer head (see fig. 2, "14" and disclosure thereof and col. 1, lines 15-18).

As to Claim 7, Balster et al. further discloses a flow sensor coupled to a controller operably coupled to the flow control device to provide flow feedback to control operation of the flow control device (col. 3, lines 1-25).

As to Claims 10-12, 20-21,23-25 have limitations similar to those treated in the above rejections, and are met by the references as discussed above.

As to Claim 14, Shimizu et al. further discloses a medium supported by spindle hub (col.4, lines 65-67).

As to Claim 18, Balster further discloses a flow sensor to provide flow feedback for the flow control device (col.3, lines 17-20).

5. Claims 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balster et al. (US 5,818,658), in view of Shimizu et al. (US 6,369,978), further in view of Ahn (US 259,576).

AS to claim 17, the combination of Balster et al. and Shimizu discloses the apparatus as claimed in claim 10, but failed to particularly disclose wherein the apparatus is characterized as a servo writer configured to write servo data to the storage medium. However, Ahn discloses such (Figs.1-2,, 4 and abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus as disclosed by Balster and Shimuzu with the teachings as disclosed by Ahn, the motivation being to provide such apparatus with the capability of writing servo patterns with improved precision control.

Allowable Subject Matter

6. Claims 4-5, 15-16,19,22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Tadepalli et al. (US 2004/0184180); Hiller et al. (US 6,985,333); Boger (US 6,917,858); Toffle et al. (US 6,445,540); Chang et al. (US 2002/0075591).

Art Unit: 2651

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dismery E. Mercedes whose telephone number is 571-272-7558. The examiner can normally be reached on Monday - Friday, from 9:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne R. Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DM



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER